method and the conciseness of Herzberger's treatment. The author's additions to the terminology are not such obvious gains.

As befits one of a well-known series of mathematical monographs, the treatment most appropriate to the subject has been employed. This assumes substantial acquaintance with the properties of matrices and the vector method, such as rather to limit the appeal of the work among average students.

The book, consisting of eight parts, may be considered in two divisions. In Parts 1–4, after a brief general consideration of systems in anisotropic media, the basis is laid for the subsequent treatment, ray-tracing formulæ being given incidentally. The chapter on Gaussian optics includes consideration of the general case with references to Gullstrand.

In Parts 5–8, devoted to the theory of aberrations, a system of first order aberrations is worked out without applications, and generalities are given for finite aperture and field. The author follows T. Smith closely, the last part being confined entirely to work by this writer.

Adequate bibliographical reference is for the most part given, although one misses mention of certain names which suggest themselves in places (for example, Rayleigh, Schwarzschild).

Handbuch der physikalischen und technischen Mechanik. Herausgegeben von Prof. Dr. F. Auerbach und Prof. Dr. W. Hort. Band 3: *Statik und Dynamik elastischer Körper nebst Anwendungsgebieten, zum Gebrauch für Ingenieure, Physiker und Mathematiker.* Pp. ix+468. 32 gold marks. Band 4, Hälfte 1: *Statik und Dynamik elastischer Körper nebst Anwendungsgebieten, zum Gebrauch für Ingenieure, Physiker und Mathematiker.* Lief. 1. Pp. vi+198. 16 gold marks. Lief. 2. Pp. xiv+199–636. 72 gold marks. Band 4, Hälfte 2: *Technische Physik der festen Körper, zum Gebrauch für Ingenieure, Physiker und Mathematiker.* Pp. xiii+614. 75 gold marks. (Leipzig: Johann Ambrosius Barth, 1927–1931.)

THIS monumental handbook in seven volumes now nears completion, the only outstanding parts to be published being the conclusion of vol. 5 (on the mechanics of fluids) and the complete index for the whole work. Of the volumes here noticed, the first (vol. 3), besides covering familiar ground in elasticity, includes an article on earthquakes and seismic waves, by Gutenberg. Vol. 4 ranges over a wide field of technical elasticity and the properties of matter, and summarises much work that is not otherwise easily accessible in collected form. Among the articles may be mentioned several on crystal structure (including one on polycrystals and their investigation by X-rays), two on the growth- and deformation-texture of organic substances and of metals, and one on workshop testing of materials. A regrettable feature of the publication is the very high price (particularly in sterling) of the last published, vol. 4.

Methods of Social Study. By Sidney and Beatrice Webb. Pp. vii+263. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1932.) 8*s.* 6*d.* net.

THIS excellent work gives the prolegomena to an applied science of society. The authors think that sociology has reached the stage occupied by the physical sciences a century ago; and that scientific method can be strictly applied to help the theoretical and practical progress of sociology. Such developments as the adoption of an official audit in public administration, the recruitment of civil servants and the organisation of trade unions, are not merely the outcome of blind forces hazily understood by the trial and error method, but the result of hypotheses actually arrived at by social workers and philanthropists working along the lines of scientific method. The authors of this work then discuss questions relating to the mental equipment of the social investigator, to the study and compiling of social facts and to the use of statistics. The great difference between social and physical sciences is given by their object: "Treasure your exceptions" should be the motto of the first; "scrap your exceptions" seems to be the physicist's point of view. Hence the social problem is not to find out how to get men and women to fit into society, but how to make a society into which will fit the men and women with all their differences and peculiarities of character, health and occupation. T. G.

Zoologie der Madagascar. Par G. Grandidier et G. Petit. Pp. 258+48 plates. (Paris: Société d'Éditions Géographiques, Maritimes et Coloniales, 1932.)

THIS is the first of a series of useful semi-popular volumes dealing with the land of the lemurs. It is admirably illustrated and fulfils its purpose well. One of the authors clearly has an intimate personal knowledge of the mammals, the account of which occupies nearly half the work and is illustrated by 27 plates. The invertebrates are treated very briefly, for as yet they are little known. The bibliography is particularly valuable. The French know how to write such books; they select the form in which they might lecture, bringing in all necessary scientific facts, but no others, in an attractive manner.

Elementary Physics: for Medical, First Year University Science Students and General Use in Schools. By G. Stead. Fourth edition. Pp. xiv+457. (London: J. and A. Churchill, 1933.) 10*s.* 6*d.*

IN this, the fourth edition of the book, very few changes have been made but some additional matter has been introduced, notably in the sections on X-rays and radioactivity. Both of these, although brief, appear to be somewhat too advanced for so elementary a work. The book should be of use to medical students, for whose benefit the mathematical work has been reduced to a minimum.